Below are some pairs of congruent line segments. For each pair, find a center of rotation for rotating the line segment on the right onto the line segment on the left.  
After you think you have found the center, here’s a way to test to see if your center is in the correct location:

* Place a piece of patty paper over the 2 segments
* Trace on of the segments and your center of rotation onto the patty paper
* Use your pencil to help anchor the patty paper at your center of rotation and rotate the patty paper to see if the traced segment will land on top of the untraced segment.

|  |  |
| --- | --- |
|  | How did you find the center of rotation? |

|  |  |
| --- | --- |
|  | How did you find the center of rotation? |

|  |  |
| --- | --- |
|  | Point A is one center of rotation using 90 degrees. There is another point that also serves as a center of rotation. Where is that point?  How did you find it? |

|  |  |
| --- | --- |
|  | Find 2 centers of rotation.  How did you find each center of rotation? |

|  |  |
| --- | --- |
|  | Find 2 centers of rotation.  How did you find each center of rotation? |

Extension: Now draw two line segments of the same length anywhere on a piece of paper. How will you find the center of rotation P so that one of your line segments can be rotated about P, to get to the position of the other line segment?